

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To: JONES, Stephen Anthony ADAMSON JONES BioCity Nottingham Pennyfoot Street Nottingham NG1 1GF GRANDE BRETAGNE		Adamson Jones 19 SEP 2005 Records <input checked="" type="checkbox"/> Scanned <input type="checkbox"/>	PCT <i>SP</i> Action: THE INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (PCT Rule 71.1)	
		Date of mailing <i>(day/month/year)</i> 15.09.2005		
Applicant's or agent's file reference 1350/673/PWO		IMPORTANT NOTIFICATION		
International application No. PCT/GB2004/002549	International filing date <i>(day/month/year)</i> 14.06.2004		Priority date <i>(day/month/year)</i> 13.06.2003	
Applicant TEN CATE PLASTICUM (UK) LIMITED et al.				
<ol style="list-style-type: none"> The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices. <p>4. REMINDER</p> <p>The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/B/301).</p> <p>Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.</p> <p>For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.</p> <p>The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.</p>				
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Nordkvist, L Tel. +49 89 2399-7034			
				

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1350673/PWO	FOR FURTHER ACTION		See Form PCT/IPEA416
International application No. PCT/GB2004/002549	International filing date (<i>day/month/year</i>) 14.06.2004	Priority date (<i>day/month/year</i>) 13.06.2003	
International Patent Classification (IPC) or national classification and IPC B29C45/16, B65D47/20			
Applicant TEN CATE PLASTICUM (UK) LIMITED et al.			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <ul style="list-style-type: none"> a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 3 sheets, as follows: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)), containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). 			
<p>4. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application 			
Date of submission of the demand 11.04.2005	Date of completion of this report 15.09.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Alink, M Telephone No. +49 89 2399-6076		



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**International application No.
PCT/GB2004/002549**Box No. I Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - international search (under Rules 12.3 and 23.1(b))
 - publication of the international application (under Rule 12.4)
 - international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

Description, Pages

1-14 as originally filed

Claims, Numbers

1-18 received on 11.04.2005 with letter of 11.04.2005

Drawings, Sheets

1/6-6/6 as originally filed

- a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. The amendments have resulted in the cancellation of:

- the description, pages
- the claims, Nos.
- the drawings, sheets/figs
- the sequence listing (*specify*):
- any table(s) related to sequence listing (*specify*):

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- the description, pages
- the claims, Nos.
- the drawings, sheets/figs
- the sequence listing (*specify*):
- any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-18
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-18
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-18
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

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Re Item V.

1 The following document is referred to in this communication:

D1 : US-B 6 497 346
D2: WO-A-0026007

2 **INDEPENDENT CLAIM 1**

2.1 Document D1, which is considered to represent the most relevant state of the art, discloses (the references in parenthesis applying to this document):

A process for the manufacture of dispensing apparatus, the process comprising:

- moulding a first component (2) including a tubular outlet, the first component being moulded in a first relatively less rigid material (cf. col 4, lines 42 - 44, figures 5,6), and
- moulding a second component (1) about the first component, the second component being moulded in a second relatively more rigid material (cf. column 4, lines 45 - 46, figures 7 - 9), and
- wherein the first component (2) is moulded with the tubular in an open configuration (cf. figure 6), and
- whereby the tubular outlet is elastically deformable, by the application of pressure to the tubular outlet, from a closed configuration to the open configuration.

From this, the subject-matter of independent claim 1 differs in that:

the moulding of the second component compresses the tubular outlet to the closed configuration

The subject-matter of claim 1 is therefore novel (Article 33(2) PCT).

2.1.1 The problem to be solved by the present invention may be regarded as:

To provide a method for manufacturing a dispensing apparatus which avoids that fluid remains in the fluid conduit (cf. page 1, line 26 - page 2, line 12).

2.1.2 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following

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reasons:

The available prior art neither discloses nor suggests the solution according to the subject matter of claim 1.

3 INDEPENDENT CLAIM 5

3.1 The dispensing apparatus for a fluid product, as searched protection for in claim 5, comprises a process characterising feature "wherein the tubular outlet is moulded in an open configuration and is at least partially encased in a more rigid material, the encasing being arranged so as to hold the tubular outlet in its non-dispensing configuration" The non dispensing configuration is specified as to be a collapsed configuration (cf. claim 5, lines 2 & 3).

Although tubular outlets moulded in an open configuration and at least partially encased in a more rigid material are known as such (cf. D1), the feature of an tubular outlet moulded in an open configuration , whereby the moulded more rigid encasing material holds the tubular outlet in a collapsed configuration is neither known nor suggested by any of the available prior art.

Claim 5 meets therefore the requirements of Articles 33(2) and (3) PCT.

4 INDEPENDENT CLAIM 13

4.1 The actuator cap, as searched protection for in claim 13, comprises a process characterising feature "wherein the tubular outlet is moulded in an open configuration and is at least partially encased in a more rigid material, the encasing being arranged so as to hold the tubular outlet in its non-dispensing configuration" The non dispensing configuration is specified as to be a collapsed configuration (cf. claim 13, lines 3 & 4).

Although tubular outlets moulded in an open configuration and and at least partially encased in a more rigid material are known as such (cf. D1), the feature of an tubular outlet moulded in an open configuration , whereby the moulded more rigid encasing material holds the tubular outlet in a collapsed configuration is neither known nor suggested by any of the available prior art.

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Claim 13 meets therefore the requirements of Articles 33(2) and (3) PCT.

5 DEPENDENT CLAIMS 2-4, 6-12, 14-18

Claims 2-4, 6-12 and 14-18 are dependent on claims 1, 5 and 13 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

6. The following is noted:

- (a) Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.
- (b) The independent claims 1,5,13 are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art being placed in the preamble (Rule 6.3(b)(I) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
- (c) The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).
- (d) The limitations of the scope of claims 4 and 14 is not clear (Article 6 PCT) because their subject matter appears to refer to features already being defined by the subject matter of the claims where they depend on.

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Claims

1. A process for the manufacture of dispensing apparatus, the process comprising
 - 5 moulding a first component including a tubular outlet, the first component being moulded in a first, relatively less rigid material, and
 - moulding a second component about the first component, the second component being moulded in a second, relatively more rigid material,
 - wherein the first component is moulded with the tubular outlet in an
- 10 open configuration and moulding of the second component compresses the tubular outlet to a closed configuration, the tubular outlet being elastically deformable, by the application of pressure to the tubular outlet, from the closed configuration to the open configuration.
- 15 2. A process as claimed in Claim 1, wherein the first, relatively less rigid, material that is suitable for the moulding of the first component is a thermoplastic elastomer.
- 20 3. A process as claimed in Claim 1 or Claim 2, wherein the second, relatively more rigid, material that is suitable for the moulding of the second component is polypropylene.
- 25 4. A process as claimed in any preceding claim, wherein the dispensing apparatus is arranged such that liquid product flowing into the tubular outlet above a certain pressure, in use, is sufficient to elastically deform the tubular outlet to its expanded dispensing configuration.
- 30 5. Dispensing apparatus for a fluid product, said apparatus comprising a container having a tubular outlet, wherein the tubular outlet has a collapsed non-dispensing configuration and wherein the tubular outlet is elastically deformable, by the application of pressure to the tubular outlet, to an expanded dispensing configuration in which the fluid product is able to flow through the tubular outlet, wherein the tubular outlet is moulded in an open configuration

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and is at least partially encased in a more rigid material, the casing being arranged so as to hold the tubular outlet in its non-dispensing configuration.

6. Dispensing apparatus as claimed in Claim 5, wherein the dispensing apparatus is arranged such that liquid product exits the container under pressure, in use, and this pressure is sufficient to elastically deform the tubular outlet to its expanded dispensing configuration.
7. Dispensing apparatus as claimed in Claim 5 or Claim 6, wherein the entire fluid conduit is collapsed, and hence all fluid product within the fluid conduit is expelled, when the tubular outlet reverts back from its dispensing configuration to its non-dispensing configuration.
8. Dispensing apparatus as claimed in Claim 5 or Claim 6, wherein the fluid conduit includes an enlarged portion which forms a sealed cavity within the tubular outlet in its non-dispensing configuration.
9. Dispensing apparatus as claimed in any one of Claims 5 to 8, wherein the container is formed in a flexible material so that manual squeezing of the container by a user urges material from the container through the tubular outlet.
10. Dispensing apparatus as claimed in any one of Claims 5 to 8, wherein the dispensing apparatus includes means for pumping material from the container through the tubular outlet.
11. Dispensing apparatus as claimed in any one of Claims 5 to 8, wherein the dispensing apparatus comprises a pressurised container fitted with a dispensing valve having a valve outlet, and an actuator in which the tubular outlet is formed, the actuator being engaged with the dispensing valve such that depression of the actuator opens the dispensing valve.

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12. Dispensing apparatus as claimed in Claim 11, wherein the actuator takes the form of a cap that is fitted to the container.

13. An actuator cap adapted to engage a pressurised container fitted with a dispensing valve having a valve outlet, the actuator cap comprising an actuator including a tubular outlet including a fluid conduit, wherein the tubular outlet has a collapsed non-dispensing configuration in which the fluid conduit is closed and wherein the tubular outlet is elastically deformable, by the application of pressure to the tubular outlet, to an expanded dispensing configuration in which the fluid conduit is opened, wherein the tubular outlet is moulded in an open configuration and is at least partially encased in a more rigid material, the casing being arranged so as to hold the tubular outlet in its non-dispensing configuration.

14. An actuator cap as claimed in Claim 13, wherein the dispensing apparatus is arranged such that liquid product exits the container under pressure, in use, and this pressure is sufficient to elastically deform the tubular outlet to its expanded dispensing configuration.

15. An actuator cap as claimed in Claim 14 or Claim 15, wherein the tubular outlet is formed in an elastomeric material.

16. An actuator cap as claimed in any one of Claims 13 to 15, wherein the fluid conduit has a flattened cross-section and is elastically deformable along the minor axis of the flattened cross-section.

17. An actuator cap as claimed in any one of Claims 13 to 16, wherein the external surface of the tubular outlet includes a formation that is adapted to mate with a corresponding formation formed on the remainder of the cap.

18. An actuator cap as claimed in any one of Claims 13 to 17, wherein the actuator comprises a portion of the cap that is movable relative to the remainder of the cap.

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